



**UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/667,966 09/22/00 CHEN

Z 0444.035

023405 MM91/1106
HESLIN ROTHENBERG FARLEY & MESITI PC
5 COLUMBIA CIRCLE
ALBANY NY 12203

EXAMINER

BARBER, T

ART UNIT

PAPER NUMBER

2882
DATE MAILED:

11/06/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

BEST AVAILABLE COPY

Office Action Summary

Application No.

09/667,966

Applicant(s)

CHEN, ZEWU

Examiner

Therese Barber

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-40 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-17, drawn to an apparatus for total reflection x-ray reflection, classified in class 378, subclass 45.
 - II. Claims 18-24, drawn to a method of using an apparatus for total reflection x-ray reflection, classified in class 378, subclass 45.
 - III. Claims 25-31, drawn to an apparatus for diffracting x-rays, classified in class 378, subclass 70.
 - IV. Claims 32-40, drawn to an apparatus for total reflection x-ray reflection, classified in class 378, subclass 82.

2. The inventions are distinct, each from the other because of the following reasons:

3. Inventions in claims 1-17 and 18-24 are related as combination and subcombination.

Inventions in this relationship are distinct from each other if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case 09/667,966, the combination as claimed does not require the particulars of the subcombination as claimed because the method as set forth in the claimed combination can be used in any other TRXF apparatus for diffracting x-rays. The subcombination has separate utility such as describing a method for TRXF that can be used with any TRXF apparatus not just the TRXF apparatus as set forth in the claimed combination.

BEST AVAILABLE COPY

Art Unit: 2882

4. Inventions in claims 25-31 and 32-40 are related as combination and subcombination.

The inventions are related as the subcombination is essential to the combination.

In the instant case 09/667,966, the combination as claimed does require the particulars of the subcombination as claimed because the apparatus for diffracting x-rays has a plurality of atomic planes with a radius of atomic planes defined by the equation $R_p = 2R \cos \alpha$ and that the TRXF apparatus as set forth in claimed combination is required to use this claimed x-ray diffracting apparatus. Therefore, the subcombination is necessary for the combination as set forth in the claimed combination.

5. Inventions in claims 1-17, 25-31 and 32-40 are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case 09/667,966, the combination as claimed does not require the particulars of the subcombination (claims 25-31) as claimed because the x-ray diffracting apparatus as set forth in the claimed combination has been specifically designed to used with the TRXF apparatus disclosed in the combination (claims 32-40) but it is not essential that the x-diffracting apparatus of claims 25-31 is used in the TRXF apparatus disclosed in claims 1-17. The subcombination has separate utility such as having a plurality of atomic planes having a radius which intersect the surface at a specific angle, wherein the radius of the atomic planes is defined by a specific equation.

6. Because these inventions are distinct for the reasons given above, restriction for examination purposes as indicated is proper.

BEST AVAILABLE COPY

Art Unit: 2882


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Therese Barber whose telephone number is (703) 306-0205. The examiner can normally be reached Monday to Friday from 8:30 a.m. to 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (703) 305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4900.

tb
November 1, 2001


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

BEST AVAILABLE COPY